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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,853	01/29/2004	Yukio Ozeki	062709-0129	2616
22428	7590	10/17/2006	EXAMINER	
FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			CIRIC, LJILJANA (LIL) V	
		ART UNIT	PAPER NUMBER	
		3744		

DATE MAILED: 10/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

N1

Office Action Summary	Application No.	Applicant(s)
	10/765,853	OZEKI ET AL.
	Examiner Ljiljana (Lil) V. Ciric <i>LVC</i>	Art Unit 3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 01 June 2006.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 8, 10, 12, 14, 16 and 17 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-7, 9, 11, 13, 15 and 18-20 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 29 January 2004 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>20040129, 20050606</u> | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election of the first species or the embodiment of Figures 1 through 3 in the reply filed on June 1, 2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Claim 1 is the only generic claim.
2. Claims 8, 10, 12, 14, 16, and 17 are hereby withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a non-elected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on June 1, 2006.

Drawings

3. The drawings filed on January 29, 2004 are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following features must be shown or the feature(s) canceled from the claim(s): the air conditioning unit being arranged *at a widthwise center of the vehicle in the instrument panel in front of a front seat of the vehicle* as recited at least in each of claims 18 and 20. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief

Art Unit: 3744

description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. Figure 8 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. The abstract of the disclosure is objected to because it is written in a run-on fashion. Correction is required. See MPEP § 608.01(b). Correction is required. See MPEP § 608.01(b).

6. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Objections

7. Claims 13, 15, and 18 are objected to because of the following informality:
“spacecomprising” [claim 13, line 2] should be replaced with “space comprising”. Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 1 through 7, 9, 11, 13, 15, and 18 through 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The preamble of each of base claims 1 and 19 recites the inventive air conditioning unit or system as being “for a vehicle”. Each of base claims 1 and 19 merely recites an intended use for the inventive air conditioning unit or system but fails to positively recite a vehicle, thus appearing to have a scope limited to the subcombination of an air conditioning unit or system. However, each of dependent claims 18 and 20 recite the limitations “the air conditioning unit arranged at a widthwise center of the vehicle in an instrument panel in front of a front seat of the vehicle”, thus appearing to positively recite the vehicle and other vehicular parts extraneous to the air conditioning unit or system such as an instrument panel and a front seat of the vehicle. These dependent claims thus appear to have a broader scope which encompasses a vehicle and various parts thereof in combination with an air conditioning system or unit and which is not consistent with the scope suggested by the preamble of the respective base claims from which claims 18 and 20 depend. Similarly, contrary to the implications of the preamble of claim 19 as previously noted above, the last three lines of claim 19 recite the limitations “the air conditioning unit and the fan unit being arranged side by side *in the widthwise direction of the vehicle*”, which limitations appear to

Art Unit: 3744

positively recite the vehicle, thus further rendering indefinite the intended scope of the claims. The claims must be redrafted to clearly recite either the subcombination of an air conditioning system or unit, or alternately, the combination of a vehicle including the inventive air conditioning system or unit.

With regard to the recitation of the limitation “flow paths” in line 2 and elsewhere in claim 1 and also in line 3 and elsewhere in claim 19, it is not clear whether this limitation is intended to refer to air flow paths or fluid flow paths or both.

Additionally with regard to all of the aforementioned examined claims, the following limitations are unclear as written because they attempt to rely on variable elements or conditions (which may or may not be present in the inventive apparatus, depending on whether or not the inventive apparatus is operably connected to a fan or blower and on whether or not the fan or blower is operative at any given instant) in an attempt to specify the location of other elements of the inventive apparatus, thus rendering the configuration of the inventive apparatus and the metes and bounds of protection sought by the claims indefinite: “on one of an upstream and downstream sides *of an air flow of the U-shaped evaporator*” [claim 1, lines 5-6]; “on one of the downstream and upstream sides *of the air flow of the U-shaped evaporator*” [claim 1, lines 7-8]; “on the downstream side *of the air flow of the U-shaped evaporator*” [claim 1, lines 9-10]; “on the upstream side *of the air flow of the U-shaped evaporator*” [claim 4, lines 2-3]; “on the downstream side *of the air flow of the U-shaped evaporator*” [claim 4, lines 3-4]; “being upstream from the U-shaped evaporator in an air flow direction” [claim 19, lines 8-9]; “downstream from the U-shaped evaporator in the air flow direction” [claim 19, line 11]; and, “arranged downstream from the U-shaped evaporator in the air flow direction” [claim 19, lines 12-13]. Note that, first of all, evaporators do not have any air flows inherently associated therewith, and, second of all, the location of an element such as a heater core cannot properly and clearly be defined by relying on a possibly non-existent air flow or air flow direction.

Art Unit: 3744

With regard to claims 2 and 3 and claims 4 through 7, 9, 11, 13, 15, and 18 depending therefrom, it is not clear whether or not the plurality of evaporators recited in claim 2 are intended to refer to the same evaporators as the center evaporator and side evaporators recited in claim 3. Claim 2 recites that "the U-shaped evaporator is formed of a plurality of evaporators" whereas claim 3, which depends from claim 2, recites that "the U-shaped evaporator is formed of a center evaporator and side evaporators arranged on each side of the center evaporator".

With regard to claims 13, 15, and 18 through 20 as written, it is not clear whether the limitation "at a corner" [claim 13, line 6; claim 14] is intended to refer to a corner of the air conditioning unit, of the air conditioning casing, or of some other element, thus further rendering indefinite the metes and bounds of protection sought.

With regard to claim 15 as written, it is not clear which previously recited element(s) is/are intended to be referred to by the term "thereof" in line 3 of the claim. Recommend replacing the term "thereof" with a direct recitation of the term referred to thereby.

10. Claims 1 through 7, 9, 11, 13, 15, and 18 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: an element which generates the air flow recited in the claims.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 3744

12. As best can be understood in view of the indefiniteness of the claims, claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sanden Corporation (EP 0 816 788 A2, made of record via IDS) in view of Sanden Corporation (JP 10-19480).

Sanden Corporation (EP 0 816 788 A2) discloses a vehicular air conditioning unit 87 including a V-shaped evaporator 45 disposed in an air conditioning casing and having plural flow paths therethrough, and a heater core 47 disposed on the downstream side of the V-shaped evaporator 45. See especially Figure 9. While the embodiment of the vehicular air conditioning unit shown in Figure 9 of Sanden Corporation (EP 0 816 788 A2) discloses the evaporator as being V-shaped instead of U-shaped, Sanden Corporation (EP 0 816 788 A2) does show an embodiment featuring a U-shaped evaporator 84 in Figure 6 as do Figures 5 through 8 of Sanden Corporation (JP 10-19480). Furthermore, absent a showing of criticality, changes in shape are generally a matter of obvious design choice not imparting patentability. See *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

Thus, it would have been obvious to one skilled in the art at the time of invention to modify the vehicular air conditioning unit 87 of Sanden Corporation (EP 0 816 788 A2) by replacing the V-shaped evaporator 45 with a U-shaped evaporator as taught by Figure 8 of Sanden Corporation (JP 10-19480) in order to minimize the dead space between the evaporator and the air conditioning casing duct wall and thus more effectively utilize the space within the air conditioning casing as taught by Sanden Corporation (JP 10-19480).

13. As best can be understood in view of the indefiniteness of the claims, claims 2 through 7, 9, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sanden Corporation (EP 0 816 788 A2, made of record via IDS) in view of Sanden Corporation (JP 10-19480) as

applied to claim 1 above, and further in view of Gehrig-Hirsiger (CH 183144, made of record via IDS).

As noted in greater detail above, Sanden Corporation (EP 0 816 788 A2) in view of Sanden Corporation (JP 10-19480) renders obvious a vehicular air conditioning unit essentially as recited in claim 1. Nevertheless, neither of the Sanden Corporation references discloses the evaporator as being formed of plurality of evaporators as recited in claims 2 and 3 of the instant application. Nevertheless, it is known in the art and taught by Gehrig-Hirsiger (CH 183144) to have a U-shaped heat exchanger or evaporator made up of a plurality of heat exchangers, including a center heat exchanger or evaporator and side heat exchangers or evaporators. See Figure 3 of Gehrig-Hirsiger (CH 183144).

Thus, it would have been obvious to one skilled in the art at the time of invention to modify the vehicular air conditioning unit 87 of Sanden Corporation (EP 0 816 788 A2) by replacing the V-shaped evaporator 45 with a U-shaped evaporator as taught by Figure 8 of Sanden Corporation (JP 10-19480) in order to minimize the dead space between the evaporator and the air conditioning casing duct wall and thus more effectively utilize the space within the air conditioning casing as taught by Sanden Corporation (JP 10-19480), and to further modify the U-shaped evaporator of the vehicular air conditioning unit by replacing the U-shaped evaporator with a three-piece evaporator or one made up of a plurality of evaporators or heat exchangers, where one of these evaporators or heat exchangers is a central one and the other two are side ones in order to, for example, facilitate manufacture and installation of the evaporator(s).

14. The non-application of prior art rejections against claims 13, 15, and 18 through 20 should not be construed as an indication that these claims contain patentable subject matter, but

Art Unit: 3744

rather that these claims could not be examined on the merits due to the multiplicity of indefiniteness problems therewith as noted in greater detail in the section of this Office action relating to 35 U.S.C. 112, second paragraph.

Conclusion

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ljiljana (Lil) V. Cirim whose telephone number is 571-272-4909. The examiner works a flexible schedule, but can normally be reached between the hours of 10:30 am and 6:30 pm most weekdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric Keasel can be reached on 571-272-4929. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system.

Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Ljiljana (Lil) V. Cirim

**LJILJANA CIRIC
PRIMARY EXAMINER**